

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/016179

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H01J37/32 H03H7/40

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01J H03H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 902 457 A (ENI TECHNOLOGIES, INC) 17 March 1999 (1999-03-17) abstract paragraphs '0001!, '0002!, '0008! paragraphs '0011!, '0014! paragraph '0016! paragraphs '0025!, '0026!; figures 1,2	1-13
A	US 6 259 334 B1 (HOWARD ARTHUR M) 10 July 2001 (2001-07-10) abstract column 4, lines 40-43 column 5, lines 3-8, 23-26 column 7, lines 16-55; figure 5 column 8, line 9 - line 30; figure 6  -/--	1-3,5

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- \*P\* document published prior to the International filing date but later than the priority date claimed

- \*T\* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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A	US 2001/004729 A1 (METZGER DONALD M ET AL) 21 June 2001 (2001-06-21) abstract paragraphs '0005!, '0007! - '0012!; figures 1-3 paragraph '0038! paragraph '0052! -----	1-6,8,9, 12,13
A	US 2003/128042 A1 (VAN HORN MARK T ET AL) 10 July 2003 (2003-07-10) paragraph '0023! -----	1-6,8,9, 12,13
A	US 2003/178140 A1 (HANAZAKI MINORU ET AL) 25 September 2003 (2003-09-25) paragraph '0066! - paragraph '0071!; figure 1 paragraph '0162! - paragraph '0166!; figure 9 paragraph '0173!; figure 10 paragraph '0177! - paragraph '0182!; figure 11 -----	1-13
A	US 6 424 232 B1 (MAVRETIC ANTON ET AL) 23 July 2002 (2002-07-23) column 4, lines 17-30; figures 2,3 column 6, line 61 - column 7, line 6 column 7, line 30 - line 50; figure 6 -----	1-13

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Information on patent family members

International Application No

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